

POTENTIAL DEEPWATER HORIZON OIL SPILL RESTORATION PROJECTS: PROVIDING INFORMATION TO ASSIST WITH PROJECT ASSESSMENT

To help you propose projects to the State of Florida's Department of Environmental Protection (DEP), we developed this project submission form. You are not required to complete this form to submit a project. However, completion of the form will help DEP gather the information required to completely and accurately evaluate a project against the selection and evaluation criteria. Where appropriate in the form, please provide references to any additional supporting information.

Project Name: *(Include project number from DEP's existing list of submitted projects, if applicable.)*

Coastal Dune Lakes Hydrologic Restoration Project

Contact Information:

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Location for Project Implementation: *(For example, city and county, GIS coordinates if known.)*

Choctawhatchee Bay / Walton County Watershed: Choctawhatchee River
Deer Lake: 30° 18' 28.74", 86° 04' 44.29"; Big Redfish Lake: 30° 20' 25.72", 86° 11' 49.62"; Little Redfish Lake: 30° 20' 13.74", 86° 10' 58.77"; Alligator Lake: 30° 20' 13.25", 86° 10' 24.80"; Draper Lake: 30° 20' 53.55", 86° 12' 59.14"

Brief Project Narrative: *(Describe what the project will do.)*

The coastal dune lakes are classified by Florida Natural Areas Inventory (FNAI) as G2 (imperiled globally because of rarity or because of some factor(s) making it very vulnerable to extinction throughout its range); and S2 (imperiled in state because of rarity or because of some factor(s) making it very vulnerable to extinction throughout its range). Tributaries, groundwater seepage, and occasional inflow of the Gulf water feeds into depressions located along the coastline in south Walton county. These lakes break open periodically through the sand dunes, discharge to the Gulf of Mexico, and then close off again through a connection called an outfall. Water from the Gulf of Mexico enters periodically through these outfalls brining in saltwater and saltwater species. These coastal dune lakes act as mini-estuaries with freshwater entering mainly from the north side of the lake and salt water entering mainly from the Gulf of Mexico.

This project proposes the removal of the old and dilapidated culverts under County Road 30A and replacing them with bridges on five (5) coastal dune lakes (Deer Lake, Big Redfish Lake, Little Redfish Lake, Alligator Lake, and Draper Lake). County Road 30A crosses these lakes where culverts separate the north and south sides of a once contiguous ecosystem. As a result, the north side of each lake has become an exclusively freshwater system while the south side has retained the brackish characteristics of a Coastal Dune Lake. The culverts act as barriers to fish and wildlife making it difficult for them to pass from one side to the other. Sediments accumulate on the upstream side of the culverts causing the depth of water to be dramatically different on the north and south side of the road. Additionally, the culverts restrict the lakes from flushing naturally. The proposed project will restore the connection and circulation of the lakes and improve the lake community and adjacent ecosystems. It will greatly improve water quality in the targeted lakes, thereby enhancing fish and wildlife habitat. The project will also decrease the effects of storm water runoff and improve flood protection by allowing the lakes to more completely flush when the natural openings occur. Pre- and post-restoration monitoring will be conducted through a cooperative project between Walton County, Choctawhatchee Basin Alliance (CBA), and the University of Florida LAKEWATCH. Walton County has an ongoing water quality monitoring program for the Coastal Dune Lakes. Through this water quality monitoring program, each lake is sampled monthly for Total phosphorus, Total nitrogen, Chlorophyll, Water clarity, Color, Temperature, Oxygen, Salinity, Turbidity, and pH. The County has been collecting this data in excess of 10 years. Future data collection will be utilized to evaluate the success of the restoration by comparative analysis.

Estimated Project Costs: *(Describe the costs of the project, including any assumptions for contingency and ongoing operations and maintenance. Identify other available funding sources such as matching funds, in kind contributions or state or federal dollars. If possible, attach a schedule of anticipated costs, by year, over the anticipated project life.)*

Total Cost: \$2,741,079

Anticipated Project Outcome with Respect to Screening Criteria

S1. Technically and administratively feasible: *(Briefly describe the critical technologies involved and any relevant past experience with similar projects.)*

This project is feasible because road and bridge construction and drainage improvements are routine processes for Public Works and contractors.

S2. Provides environmental benefits: *(Briefly describe the nature, magnitude, and timing of any environmental benefits attributable to the project and any potential environmental costs associated with implementing or maintaining the project, e.g., loss of a habitat or conversion of habitat from one type to another during implementation.)*

Currently the culverts on the Coastal Dune Lakes (Deer Lake, Big Redfish Lake, Little Redfish Lake, Alligator Lake, and Draper Lake) are acting as a fish and wildlife barriers and a water control device. By replacing the culverts with bridges, the north and south side of the lakes will be reconnected providing critical habitat for fisheries and wildlife, improve the water quality by allowing the more natural flushing of the lake, and improving flood control by removing the water control devices (culverts).

S3. Does not conflict with any ongoing or planned response or remediation work: *(Briefly describe ongoing response activities in the project implementation area, if any, and why the project does or does not interfere with that work.)*

No conflicts are expected. Letters of support for this project were obtained from Choctawhatchee Basin Alliance, Florida Department of Environmental Protection, Friends of Scenic 30A, Northwest Florida Water Management District and US Fish and Wildlife Service. Additionally, it is a recommended project in the Coastal Dune Lakes Management Plan adopted by Walton County Board of County Commissioners.

S4. Complies with applicable and relevant federal, state, local, and tribal laws and regulations: *(No information is needed for this screening criteria.)*

Yes

Anticipated Project Outcome with Respect to Evaluation Criteria

E1. Will restore, rehabilitate, or replace a natural resource or service¹ believed/demonstrated to have been injured as a result of the Deepwater Horizon oil spill or associated response activities: *(Briefly describe the nature of any relationship between the new/improved resources or services and those adversely impacted by the oil spill.)*

The coastal dune lakes were impacted by the Deepwater Horizon oil spill by the response efforts and the emergency permits to build berms. The project will help offset those impacts by restoring the connectivity and circulation of the lakes and enhancing the ecosystem of the lakes.

E2. Is located in, or nearby, resources or services injured by the deepwater horizon spill: *(Briefly describe where the project would be implemented with respect to past/ongoing remediation work.)*

The proposed project is located on five (5) of Walton County's Coastal Dune Lakes (Deer Lake, Big Redfish Lake, Little Redfish Lake, Alligator Lake, and Draper Lake). The lakes are located immediately adjacent to the Gulf of Mexico where all response activities were conducted.

E3. Is ready for implementation, e.g., design, permitting, and necessary impacts assessments have been completed: *(Briefly describe where in the permitting process the project stands along with an estimated date of when the project can be implemented if it is not currently ready.)*

- Walton County Board of County Commissioners has adopted a resolution in favor of this project.
- Walton County Board of County Commissioners have adopted a Coastal Dune Lakes Management Plan, which identifies the need for projects that addressed water quality, watershed and inlet management, aquatic plant management, the associated fish and wildlife issues.
- An engineering firm has been consulted for a professional cost estimate on this project. The cost estimate includes the design, permit, engineer, project management, and construction activities.

¹ In this form, "Services" (or "natural resource services") refers to the functions performed by a natural resource for the benefit of another natural resource and/or the public. Services can be "ecological services" – physical, chemical or biological functions that one natural resource provides for another (such as provision of food) – or "human services" – the use of natural resources used by humans that provide value to the public (such as hunting and fishing).

E4. Is cost effective: *(Briefly describe why you think the project is cost effective. Discuss whether this project is more cost effective than alternative projects which would provide similar resource or service benefits.)*

Bridges have a longer lifespan than culverts and will not need to be maintained as frequently or replaced for many years.

E5. Has a high potential for long-term success as demonstrated by incorporating established/reliable methods and technologies: *(Briefly describe if/how critical methods and technologies that will be used to implement the project could be considered reliable or proven.)*

Yes, bridges are proven structures that have a long life expectancy and will improve the flow and connection of the lakes for many years into the future.

E6. Is likely to provide benefits rapidly following implementation: *(Briefly describe the anticipated change in benefits anticipated over time.)*

Yes. The proposed construction project will restore brackish marsh, open water, and pine flatwoods ecosystems. It will greatly improve connectivity and water quality in the five (5) targeted lakes and enhance fish and wildlife habitat. The project will also decrease the effects of storm water runoff and improve flood protection and enhance community resilience. The coastal dune lakes provide habitat for a wide variety of flora and fauna and exist as a natural estuarine transition between the Gulf and upland areas. In addition, this project will assist with maintaining healthy coastal dune lakes by restoring the hydrologic flow, creating resilient communities (reconnecting wetlands ecosystems) within the lakes, and increasing flood protection.

E7. Has a high likelihood of public acceptance: *(Briefly describe evidence to support the given answer based on surveys or results and assessments from past projects. Known or likely opposition to a project should be recognized.)*

Yes. The Coastal Dune Lakes are highly regarded natural resources; and improvements and restoration will be greatly appreciated by the citizens of Walton County.

WE WANT YOUR INPUT!

Submit this form via email to Jessica Kanes at Jessica.Kanes@dep.state.fl.us . If you have any questions or concerns about the process for submitting a project, please contact:

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A current summary of projects is accessible through the Florida DEP's website at <http://www.dep.state.fl.us/deepwaterhorizon/projects.htm> (click on "View the list of restoration project ideas").